

## **ABSTRACT**

A system and method for detecting a milling endpoint on a semiconductor sample by directing an ion beam from a focused ion beam (FIB) apparatus at the sample and using charge pulse detection electronics (CPDE) components to generate a distribution curve on a histogram display. A preferred configuration of the CPDE components includes a charge preamplifier, a pulse amplifier, a pulse shaper, and a multichannel analyzer (MCA).